DOI:
10.1111/josi.12217

Document Version
Peer reviewed version

Autonomy Support Fosters Lesbian, Gay and Bisexual Identity Disclosure and Wellness, Especially for Those with Internalized Homophobia

William S. Ryan

University of California, Santa Barbara

Nicole Legate

Illinois Institute of Technology

Netta Weinstein

Cardiff University

Qazi Rahman

King's College London

Author Note

William S. Ryan, Department of Psychological & Brain Sciences, University of California, Santa Barbara; Nicole Legate, Department of Psychology, Illinois Institute of Technology; Netta Weinstein, School of Psychology, Cardiff University, Cardiff, UK.; Qazi Rahman, Department of Psychology, King's College, London, UK.

Correspondence concerning this article should be addressed to William S. Ryan, Department of Psychological & Brain Sciences, University of California, Santa Barbara, CA 93106. E-mail: ryan@psych.ucsb.edu

Abstract

Lesbian, gay, and bisexual (LGB) individuals experience disparities in psychological well-being, including greater symptoms of depression and anxiety, relative to their heterosexual peers. One group of LGB individuals is particularly vulnerable – those with high levels of *internalized homophobia*, or sexual prejudice directed toward the self. The current research explored whether a supportive social environment might be especially beneficial for this group. Specifically, we tested whether autonomy support within a given social environment (e.g., with family, friends, and peers or coworkers) is associated with greater identity disclosure and well-being in that environment, especially for those high in internalized homophobia. Using within-person analyses, we found support for this: perceptions of autonomy support were associated with more disclosure (outness) and well-being across all levels of internalized homophobia, but this association was particularly strong for those high in internalized homophobia. Implications of these findings for promoting well-being among LGB individuals, a critical social issue, are discussed.

Keywords: autonomy support, internalized homophobia, coming out, well-being

Autonomy Support Fosters Lesbian, Gay and Bisexual Identity Disclosure and Wellness, Especially for Those with Internalized Homophobia

Despite recent trends of decreasing stigmatization – or social devaluation – of lesbian, gay, and bisexual (LGB) individuals within North America and Europe (Pew Research Center, 2013), disparities in psychological well-being continue to emerge when comparing this group to heterosexuals. For LGB individuals, the risk of depression and anxiety disorders is 1.5 to 2.6 times higher than for heterosexuals (King et al., 2008). At greatest risk for well-being deficits are LGB individuals who internalize the stigma about their sexual identity, or who show *internalized homophobia* (Herrick et al., 2013; Meyer, 2013). In the present paper we examine how supportive social environments relate to levels of sexual identity disclosure and psychological well-being and whether these supportive environments might be especially linked for those high in internalized homophobia. Drawing on principles of self-determination theory (SDT; Ryan & Deci, 2000), we argue that perceiving *autonomy support*, or support for self-expression and choiceful action, will be associated with greater disclosure and well-being (less depression and anxiety) for LGB individuals within these supportive contexts. Further, we posit that those high in internalized homophobia may be especially likely to experience greater outness and well-being in autonomy supportive contexts.

Well-Being Disparities among LGB Individuals: The Role of Internalized Homophobia

Across the lifespan, sexual minorities experience worse wellness outcomes compared to heterosexuals (Fredriksen-Goldsen, Kim, Barkan, Muraco, & Hoy-Ellis, 2013; King et al., 2008). Research comparing bisexual individuals to gay men and lesbians suggests that bisexual individuals are at even greater risk of experiencing psychological distress (Semlyen, King, Varney, & Hagger-Johnson, 2016). Growing evidence indicates that minority stress, or chronic

stress related to holding a stigmatized identity (Meyer, 2013), may in part explain this mental health disparity (Hatzenbuehler, 2009). For example, LGB individuals frequently face harassment, victimization, and rejection from close others (e.g., Herek, 2009). These experiences of prejudice and social stigma may lead to poorer mental health outcomes, particularly depression (Burton, Marshal, Chisolm, Sucato, & Friedman, 2013).

However, prejudice need not be experienced directly to impact well-being. LGB individuals grow up aware of the negative stereotypes and attitudes associated with a sexual minority identity, and as they come to realize their sexual orientation, may apply these negative views to the self (Meyer, 1995). This self-stigma, or internalized homophobia, acts as another form of minority stress as LGB individuals experience and cope with identity-related tension and shame (Meyer, 2013). Among the range of minority stressors, internalized homophobia may uniquely contribute to poor well-being because it influences psychological processes, self-concept, and coping behavior even in the absence of direct threats (Meyer, 1995). Moreover, internalized homophobia may become self-perpetuating as individuals anticipate and perceive more negative treatment on the basis of their identity (Meyer & Dean, 1998). The association between internalized homophobia and psychological distress in LGB individuals is indeed consistent (see meta-analysis by Newcomb & Mustanski, 2010) and these associations are as strong for lesbian and bisexual women as they are for gay and bisexual men. In short, individuals high in internalized homophobia are most vulnerable to developing depression and anxiety. Research examining factors that may improve the well-being of individuals with high internalized homophobia is therefore critical in reducing LGB mental health disparities.

Coming Out and Well-being

Theory and research suggest that for LGB individuals, coming out can be a critical part of

identity integration and self-acceptance (Cass, 1984), and is important to the development of a stable, positive, and authentic sense of self, and for mental health and well-being (Ragins, 2004; Legate, Ryan & Weinstein, 2012). Coming out is posited to benefit well-being by reducing the stress, vigilance, and self-monitoring associated with concealment (Miller & Major, 2000; Crichter & Ferguson, 2014). Additionally, concealment prevents people from behaving authentically in interpersonal interactions (Bosson, Weaver, & Prewitt-Freilino, 2012) and may make it difficult to connect with similar others (i.e., other LGB people), which may further undermine well-being by reducing sources of social support (Frable, Platt, & Hoey, 1998).

However, the relationship between concealment and psychological distress is mixed, with some studies suggesting no relationship (e.g., Fredriksen-Goldsen et al., 2013), others a positive relationship (e.g., Pachankis, Cochran, & Mays, 2015) and still others pointing towards a negative relationship (e.g., Ragins, 2004). For example, while coming out is associated with many benefits, it also can leave individuals vulnerable to experiencing harassment, assault or rejection (e.g., D'Augelli 2006). Emerging work suggests that decisions to disclose an LGB identity may be based in part on how specific individuals or the social environment will react (e.g., Ryan, Legate & Weinstein, 2015).

Social Contexts and Disclosure

Despite often dichotomous language, coming out or sexual identity disclosure varies within persons and across contexts. Indeed, evidence suggests that LGB individuals disclose selectively (e.g., Cole, 2006). For example, in one study, only 23% of LGB youth were out to everyone (D'Augelli, 2006). Variability exists also in the level of disclosure or outness of individuals in a given social context (Chaudoir & Fisher, 2010), and the degree to which one can openly discuss identity-relevant topics (Mohr & Fassinger, 2000). For example, a gay man's

family and friends may both be aware of his sexual orientation, but he may only feel comfortable talking about dating, LGB rights, and other identity-relevant issues with with his friends – not his family. Thus, this man displays greater outness with his friends than with his family. Assessing outness along such a continuum captures the full range of disclosure including contexts in which one's sexual orientation may be known, but identity-relevant topics are never or rarely discussed.

Research suggests that level of disclosure is guided by fears of prejudicial treatment and rejection (e.g., Radkowsky & Siegel, 1997), and that those higher in internalized homophobia are especially prone to fear rejection from others based on their sexual orientation (e.g., Pachankis, Goldfried, & Ramrattan, 2008). Indeed, individuals high in internalized homophobia are less likely than those with lower levels to disclose and discuss their sexual orientation with others (Herek, Cogan, Gillis & Glunt, 1998). It follows, therefore, that LGB individuals with high levels of internalized homophobia may be particularly sensitive to the acceptance or safety felt within a social context, and that feeling acceptance is even more important in encouraging self-disclosure and well-being for these individuals.

Autonomy-Supportive Social Contexts

We use the framework provided by self-determination theory (SDT; Ryan & Deci; 2000) to understand how LGB individuals generally, and those with internalized homophobia specifically, experience their social environments. A focus within SDT is how relationships make people feel safe to be authentic, versus closed off and defensive, with others. Social contexts vary greatly in the extent to which they support an individual's *autonomy*, or one's need to behave authentically and in accord with their values and beliefs (Deci, La Guardia, Moller, Scheiner, & Ryan, 2006). *Autonomy support* refers to the degree to which others encourage authentic expression of all aspects of the self, regardless of the specific values, choices, and

interests being expressed (Ryan & Deci, 2000), and is associated with a host of positive outcomes including better mental and physical health (Vansteenkiste & Ryan, 2013). Social environments can fail to support autonomy by exerting pressure to behave or act in a specific way. In other words, when autonomy is not supported people feel pressured to be how others would like them to be instead of acting in accord with their own values and desires.

As such, perceiving autonomy support increases individuals' willingess to express different aspects of their personality (La Guardia & Ryan, 2007; Uysal, Lin, & Knee, 2010). More immediate to this paper, Legate and colleagues (2012) examined autonomy support across a variety of social contexts (e.g., family, friends, faith community, work) and found that individuals reported greater levels of sexual identity dislosure and well-being in contexts perceived to support autonomy. This study suggests that autonomy support may indeed convey a sense of safety and acceptance, facilitating LGB identity disclosure and well-being.

Because autonomy support conveys acceptance for one's authentic self (Ryan & Deci, 2000), it is likely particularly important for LGB individuals as they hold an identity that is too often met with stigma and a lack of acceptance. For LGB individuals high in internalized homophobia, perceiving acceptance for their authentic self may be particularly valuable as they struggle with self-acceptance and greater psychological distress. Given this possibility, the present research builds off of work by Legate and colleagues (2012) by testing, for the first time, the expectation that individuals high in internalized homophobia may stand to benefit even more from autonomy-supportive contexts.

Present Research

Research examining how social contexts can promote resilience especially among those high in internalized homophobia is critical as internalized homophobia does not appear to be

decreasing despite greater societal acceptance (Newcomb & Mustanski, 2010), and research on factors that can promote resilience despite minority stress is lacking (Kwon, 2013). In the present research we utilize within-person analyses to examine whether perceived autonomy support in a given social context (family, friends, co-workers or peers) is associated with more outness and well-being in that context. New to this paper, we test these context-specific experiences side-by-side with between-person differences in internalized homophobia, a characteristic that leaves individuals vulnerable to higher personal costs as a result of holding this often stigmatized identity. Specifically, we hypothesize that perceiving autonomy support will predict greater self-disclosure and well-being and that this relation will be particularly strong for individuals with high levels of internalized homophobia.

Method

Participants and Procedure

One-hundred and fifty-six lesbian, gay, and bisexual individuals (65 males, 88 females, 2 transgender males, 1 transgender female) living in the United Kingdom, and primarily but not exclusively in London and Bristol were recruited via word-of-mouth. The sample ranged in age from 18-55 years (M = 26.0 years, SD = 9.12 years), and 56% identified as lesbian, 22% identified as gay and 22% identified as bisexual. Sixty-four percent of participants completed an online survey and the rest completed the same survey using pencil and paper. In both cases, it was made clear that survey responses were kept anonymous. Participants responded to questions about their level of outness, well-being, and perceptions of autonomy support from various groups of people (i.e., family, friends, and coworkers or school peers). They also completed a trait measure of internalized homophobia, described below. Two individuals did not provide sufficient data and were excluded from all analyses. Two other individuals did not respond to

the question assessing outness with coworkers/peers, but were included in all analyses as they provided sufficient data for multilevel models.

Measures

Revised Internalized Homophobia Scale (IHP-R). Nine items assessed feelings of internalized homophobia (Herek et al., 1998; Meyer, 1995). Participants rated the items (e.g., ‘‘I feel that being gay, lesbian or bisexual is a personal shortcoming for me," "I feel alienated from myself being lesbian, gay, or bisexual") on a 5-point scale ranging from 1 (*disagree strongly*) to 5 (*agree strongly*). Cronbach's alpha for this scale was high (α = .89).

Autonomy Support Questionnaire (ASQ). Perceptions of autonomy support versus control in social contexts were assessed using the ASQ (Deci, et al., 2006). In order to reduce participant burden, participants responded to only five items from the ASQ (demonstrated to be top loading items from Legate et al., 2012) for each of the three social contexts (for a total of 15 items): family, friends, and coworkers or school peers. Items included "[My family members] encourage me to express my true emotions", and were paired with a scale ranging from 1 (*not at all true*) to 7 (*very true*). The five items were averaged to form an autonomy support score for each social context. Internal consistency was good across contexts (αs =.88 – .90).

Outness Inventory (OI). The OI (Mohr & Fassinger, 2000) assesses the extent to which individuals disclose their sexual orientation to various individuals. Rather than asking about specific individuals we adapted the items to reflect the three social contexts of interest here (family, friends, co-workers or school peers). Participants rated the extent to which they disclosed their sexual orientation in each social context (for a total of 3 items) using a 7-point scale ranging from 1 (*person definitely does not know about your sexual orientation status*) to 7 (*person definitely knows about your sexual orientation status, and it is openly talked about*). If

no such context exists in the participant's life, she or he has the option of selecting 0. No participants selected this option, however.

Psychological well-being. Psychological well-being scores were derived from items selected from three well-validated instruments used in Legate et al. (2012) and were assessed across the three social contexts. Risk for depression was assessed with three items (e.g., "When I am with my [family], I feel sad") from the Center for Epidemiological Studies-Depression Scale (CES-D; Radloff, 1977). Self-esteem was measured with three items (e.g., "When I am with my [family], I feel dissatisfied with myself") from the Rosenberg Self-Esteem Scale (Rosenberg, 1979). Lastly, four items from the *General Health Questionnaire* (Goldberg, & Hillier, 1979) assessed anxiety (e.g., "When I am with my [family], I feel nervous and uptight"). Participants were asked to rate their feelings in each context over the last month on a 7-point scale ranging from 1 (*not at all true*) to 7 (*very true*). Thus, participants completed a total of 30 well-being items, 10 for each social context. Subscales demonstrated high internal consistency across social contexts: depressive feelings (αs = .80 – .90) and anxiety (αs = .83 – .89), with the exception of self-esteem (αs = .65 – .76). As a result, we only present results for depression and anxiety.

Results

Preliminary Results

For descriptive purposes, we examined whether there were mean differences in perceptions of autonomy support, outness, and well-being with each of the three social groups (i.e., family, friends, and coworkers/school peers) using a repeated measures analysis of variance (ANOVA) with a Greenhouse-Geisser correction to account for non-sphericity in the data. Supporting past research showing that LGB individuals are selective in their disclosure, there were indeed significant differences in how out people were across social groups, $F(1.89, 285.76)$

= 70.48, $p < .001$. There were also differences in perceptions of autonomy support across social groups, $F(1.71, 261.24) = 65.85$, $p < .001$. Similarly, feelings of depression $F(1.78, 272.52) = 18.04$, $p < .001$ and anxiety $F(1.79, 273.27) = 31.84$, $p < .001$ differed across the social groups. In sum, people were most out with their friends, and felt the most autonomy support and well-being with friends compared with family members and coworkers or school peers. See Table 1 for means, standard deviations and results of pairwise comparisons between social groups.

Next, we tested for differences in autonomy support, outness, internalized homophobia and well-being across the three sexual orientation categories as research often shows mean differences between these groups (e.g., Semlyen et al., 2016). Only one difference emerged with outness, $F(2, 151) = 9.29$, $p < .001$: bisexuals were less out than both gay men ($p < .001$) and lesbians ($p < .001$), and the latter groups did not differ from one another ($p > .15$). There were no differences across sexual orientation groups for average perceived autonomy supportiveness, well-being variables, or trait levels of internalized homophobia (Fs < 1.59, ps > .15; see Table 1).

We also examined correlations of variables aggregated across the three social groups to explore patterns between-persons. Greater outness was related to lower anxiety ($r = -.19$ $p = .02$), marginally lower depressive feelings ($r = -.14$, $p = .08$), and greater perceived autonomy support ($r = .47$, $p < .001$). Consistent with the literature, those with higher levels of internalized homophobia were less out ($r = -.28$, $p < .001$) and reported greater anxiety ($r = .37$, $p < .001$) and depression ($r = .36$, $p < .001$). As well, experiencing more autonomy support was associated with less internalized homophobia ($r = -.23$, $p = .004$). Finally, older participants were more out ($r = .20$, $p = .01$), had less internalized homophobia ($r = -.27$, $p < .001$), and reported lower anxiety ($r = -.25$, $p = .001$) and depression ($r = -.27$, $p = .001$) than younger participants.

Multilevel Modeling

Next, we used hierarchical linear modeling software (HLM 7.0; Raudenbush et al., 2011) to test our hypotheses that autonomy support will predict outness, that autonomy support and outness will predict better well-being, and that internalized homophobia will moderate the effects of autonomy support on outness and well-being. Multilevel models are able to accommodate the nested structure of the data and are better suited than ordinary-least squares regression to handle missing data (Bolger & Shrout, 2007; Little & Rubin, 1987). Unconditional models suggested that there was sufficient variance in outcomes at the within-person level (outness: 82%; depression: 36%; anxiety: 46%) to add predictors to the model. For all models except when outness was the outcome variable, autonomy support and outness were simultaneous predictors at Level-1 (the within-person level). At Level-2 (the between-person level), internalized homophobia was entered as a predictor of the intercept, and as a moderator of the slope of autonomy support. Also at Level-2, two dummy coded sexual orientation variables (gay and lesbian, coded 1, with bisexuals as the reference group, coded 0) were included as covariates in all analyses. Level-1 variables were centered on individual means as recommended by Bryk and Raudenbush (1992). All *b*s are the unstandardized regression coefficients, and Level-1 effects were set as random, or allowed to vary between individuals. For all multilevel results, 95% confidence intervals of the regression coefficients are presented.

Replicating results from prior research (Legate et al., 2012), we found that perceiving autonomy support in a social context was robustly linked to being more out in that context, $b = .67$, $SE = .06$, $p < .001$, CI [.56, .79]. Internalized homophobia was related to being less out in any given social context, $b = -.19$, $SE = .09$, $p = .04$, CI [-.37, -.01]. Bisexuals were less out than gay men or lesbians (*p*s < .01). Next, we tested the interaction of autonomy support and internalized homophobia to predict outness, which was significant, $b = .14$, $SE = .07$, $p = .047$,

CI [.003, .28]. Using a macro for testing simple effects in HLM (Shacham, 2009), we found that autonomy support was more strongly related to outness for those with higher levels of internalized homophobia, b = 1.04 SE = .22, p < .001, CI [.62, 1.46], compared to those with lower levels b = .79, SE = .10, p < .001, CI [.60, 1.00]. This effect reveals that autonomy support is especially important for outness in those who are high in internalized homophobia (see Table 2 for a summary of multilevel models and Figure 1a for this interaction effect).

As well, autonomy support experienced in different social groups predicted lower anxiety and depression, bs = -.33 & -.21, respectively, SEs = .06, ps < .001, CIs range from [-.09, -.45]. Being more out in a social group was also related to lower anxiety, b = -.08, SE = .03, p = .02, CI [-.14, -.01], and marginally lower depression, b = -.07 SE = .04, p = .057, CI [-.14, .002]. Sexual orientation was not related to either depression or anxiety (ps > .15). Internalized homophobia predicted greater anxiety and depression, bs = .55 & .56, respectively, SE = .11 & .12, ps < .001, CIs range from .32, .80], and interacted with autonomy support to predict anxiety, b = -.12, SE = .05, p = .01, CI [-.22, -.03], and depression, b = -.16, SE = .07, p = .03, CI [-.30, -.02]; see Figure 1b for the interaction effect for depression). Again, the relation between autonomy support and well-being was stronger for those high in internalized homophobia (anxiety: b = -.62, SE = .14, p < .001, CI [-.89, -.35]; depression: b = -.60, SE = .20, p < .001, CI [-.99, -.21]) as compared with those lower in internalized homophobia (anxiety: b = -.43, SE = .07, p < .001, CI [-.58, -.28]; depression: b = -.34, SE = .09, p < .001, CI [-.52, -.15]). Therefore, across well-being and disclosure outcomes, results supported hypotheses that autonomy support was more important for those high in internalized homophobia[1].

[1] A similar, but marginal pattern of results emerged for self-esteem. Autonomy support predicted more self-esteem: b = .32, SE = .06, p < .001, CI [.20, .42]. Outness did not relate to self-esteem: b = .03, SE = .04, p = .42, CI [-.04, .11] nor did sexual orientation (ps > .15). IHP predicted less SE: b = -.48, SE = .12,

Having identified that internalized homophobia moderated the effects of autonomy support controlling for sexual orientation, we were curious whether autonomy support interacted with sexual orientation to predict anxiety and depression. Because research suggests that bisexuals are particularly vulnerable to well-being deficits (Semlyen et al., 2016), we explored whether, like those higher in internalized homophobia, bisexuals would be especially benefited by autonomy support. In order to examine this question we conducted a set of post-hoc analyses similar to those described above. Instead of controlling for sexual orientation, however, the interaction of each dummy coded sexual orientation variable (gay and lesbian dummy coded 1 with bisexuals as the reference group, coded 0) with autonomy support was tested. Results revealed that sexual orientation showed marginal interactions with autonomy support to predict anxiety (*b*s = .24 & .17, *p* = .059 & .098, CIs range [-.03, .49]) and depression (*b*s = .22 & .21, *p* = .09 & .08, CIs range [-.03, .47]). Exploratory simple slopes show that autonomy support had a stronger effect on anxiety and depression for bisexuals (*b*s range from -.54 – -.41, *p*s < .001) as compared to both gay men and lesbians (*b*s range from -.29 – -.20, *p*s < .01) all CIs ranging from [-.69 to -.08]. In other words, for everyone as perceptions of autonomy support increase anxiety and depression decrease, however this effect was stronger for bisexuals compared to gay men and lesbians. There was no interaction with autonomy support in predicting outness, *p*s > .50.

Discussion

The current work replicated findings from Legate and colleagues (2012) and extended them by examining whether autonomy support functions differently across levels of internalized homophobia. As in our prior work, we found autonomy support within a social context to be a

---

p < .001, CI [-.72, -.23] and showed a marginal interaction with autonomy support to predict SE: *b* = .09, *SE* = .05, *p* = .07, CI [-.01, .19].

robust predictor of being out as LGB in that context. As well, both perceptions of autonomy support and being out in a social context were associated with lower depression and anxiety. Consistent with the literature (Herek et al., 1998; Newcomb & Mustanski, 2010; Semlyen et al., 2016), we also found that those with higher levels of internalized homophobia were less out across social contexts, and felt lower well-being than those with lower levels of internalized homophobia.

New to this research, we found that internalized homophobia moderated the effects of autonomy support on outness and well-being. Specifically, perceiving autonomy support was more strongly associated with outness and experiencing lower depression and anxiety in those with high levels of internalized homophobia than in those with lower levels. Given that individuals high in internalized homophobia are more cautious when making decisions to come out, it may be that autonomy support facilitates disclosure by reducing perceived risks. Future research should investigate how minority stress factors such as general psychological processes (e.g., rumination) associated with depression and anxiety, self-concept, and expectations of rejection (Meyer, 2013) may explain why autonomy support may be particularly beneficial to those with internalized homophobia. We also found a similar pattern, albeit marginal, when analyzing the strength of the effect of autonomy support on depression and anxiety for bisexuals compared to gay men and lesbians. Although not significant in this sample, bisexuals are another LGB subgroup that tends to demonstrate worse mental health outcomes as compared to gay men and lesbians (Semlyen et al., 2016). Therefore, we explored whether autonomy support may be particularly beneficial to bisexual individuals. Indeed, results indicated a marginal effect suggesting that autonomy support is more strongly linked with lower anxiety and depression among bisexuals than gay men and lesbians. It is possible that autonomy support is particularly

important for various types of vulnerable groups, though more research is needed to support this.

Importantly, these data are cross-sectional and cannot speak to a causal role of autonomy support in promoting positive outcomes, or conversely of internalized homophobia causing negative consequences. It could be that those who are more 'out' and who have lower anxiety and depression see others as more supportive of their autonomy, and view their LGB identity more positively. On this latter point, there is research and theory to suggest that coming out is associated with decreases in internalized homophobia (e.g., Schrimshaw, Siegel, Downing, & Parsons, 2013), though the directionality of this relation remains unknown. Future work should use quasi-experimental or longitudinal methods to test whether autonomy support from one's social environments influences disclosure decisions and wellness in those evnironments, and whether autonomy support is particularly helpful in promoting outness and well-being among those high in internalized homophobia. Future research should also examine whether perceiving autonomy support from important others over time can reduce internalized homophobia and improve overall well-being. Given that those high in internalized homophobia have experienced and anticipate social rejection of their sexual identity (Pachankis et al., 2008), experiencing environments that convey acceptance may help reduce anticipated rejection and internalized stigma. Whether perceived autonomy support within specific contexts and relationships can spill over and impact well-being more generally also remains an empirical question, though correlational work suggests that it may (Ryan, et al., 2015).

These findings have important social implications. Our work supports other research showing that a supportive social context can act as a buffer against minority stress to promote LGB mental health (e.g., Hershberger & D'Augelli, 1995) and that this buffering effect may be particularly strong for those most likely to suffer from poor mental health outcomes - individuals

with high internalized homophobia and potentially bisexuals as well (Newcomb & Mustanski, 2010; Semlyen et al., 2016). Furthermore, we found that autonomy support was associated with outness and well-being across levels of internalized homophobia, suggesting that interventions in schools and workplaces are warranted. These could include strategies or policies to boost autonomy support in workplaces and schools via (but not limited to) safe spaces where LGB youth can receive support from staff or teachers, "gay-straight alliance" networks, curricula that address health and social concerns of LGB youth, explicit workplace and school policies that prohibit discrimination and harassment based on sexual orientation, LGB staff networks in workplaces, and efforts to protect LGB organizations and social venues. Growing evidence suggests structural changes (such as policies that increase support resources and a sense of inclusion) positively impact mental health among LGB individuals (Hatzenbuehler, Birkett, Van Wagenen, & Meyer, 2014). Importantly, interventions to boost autonomy support in social settings versus interventions that focus exclusively and specifically on reducing sexual prejudice may be more effective as they may reduce reactance among participants (Legault, Gutsell, & Inzlicht, 2011). While this hypothesis remains to be tested, the present research suggests that improving the social supports available to LGB individuals may be critical to reducing disparities in LGB psychological well-being.

References

Bolger, N., & Shrout, P. E. (2007). Accounting for statistical dependency in longitudinal data on dyads. In T. D. Little, J. A. Boviard, & N.A. Card (Eds.) *Modeling contextual effects in longitudinal studies* (pp. 285-298). Mahwah, NJ: LEA.

Bosson, J. K., Weaver, J. R., & Prewitt-Freilino, J. L. (2012). Concealing to belong, revealing to

be known: Classification expectations and self-threats among persons with concealable stigmas. *Self and Identity, 11,* 114–135. doi:10.1080/15298868.2010.513508

Bryk, A. S., & Raudenbush, S. W. (1992). *Hierarchical linear models.* Newbury Park, CA: Sage.

Burton, C. M., Marshal, M. P., Chisolm, D. J., Sucato, G. S., & Friedman, M. S. (2013). Sexual minority-related victimization as a mediator of mental health disparities in sexual minority youth: A longitudinal analysis. *Journal of Youth and Adolescence, 42*, 394-402. doi:10.1007/s10964-012-9901-5

Cass, V. C. (1984). Homosexual identity formation: Testing a theoretical model. *Journal of Sex Research, 20,* 143-167.

Chaudoir, S. R., & Fisher, J. D. (2010). The disclosure processes model: Understanding disclosure decision making and postdisclosure outcomes among people living with a concealable stigmatized identity. *Psychological Bulletin, 136,* 236–256. doi:10.1037/a0018193

Cole, S. W. (2006). Social threat, personal identity, and physical health in closeted gay men. In A. Omoto & H. S. Kurtzman (Eds.), *Sexual orientation and mental health: Examining identity and development in lesbian, gay, and bisexual people* (pp. 245-267). Washington, DC: American Psychological Association.

Critcher, C. R., & Ferguson, M. J. (2014). The cost of keeping it hidden: Decomposing concealment reveals what makes it depleting. *Journal of Experimental Psychology: General, 143,* 721-735. doi:10.1037/a0033468

D'Augelli, A. R. (2006). Developmental and contextual factors and mental health among lesbian, gay, and bisexual youths. In A. M. Omoto & H. S. Kurtzman (Eds.), *Sexual orientation and mental health: Examining identity and development in lesbian, gay, and bisexual*

people (pp. 37–53). Washington, DC: American Psychological Association.

Deci, E. L., La Guardia, J. G., Moller, A. C., Scheiner, M. J., & Ryan, R. M. (2006). On the benefits of giving as well as receiving autonomy support: Mutuality in close friendships. *Personality and Social Psychology Bulletin, 32,* 313-327.

Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry, 11,* 227 – 268.

Frable, D. E. S., Platt, L., & Hoey, S. (1998). Concealable stigmas and positive self-perceptions: Feeling better around similar others. *Journal of Personality and Social Psychology, 74,* 909–922.

Fredriksen-Goldsen, K. I., Kim, H. J., Barkan, S. E., Muraco, A., & Hoy-Ellis, C. P. (2013). Health disparities among lesbian, gay, and bisexual older adults: Results from a population-based study. *American Journal of Public Health, 103,* 1802-1809. doi:10.2105/AJPH.2012.301110

Goldberg, D. P., & Hillier, V. F. (1979). A scaled version of the General Health Questionnaire. *Psychological Medicine, 9,* 139-145.

Hatzenbuehler, M. L. (2009). How does sexual minority stigma "get under the skin?" A psychological mediation framework. *Psychological Bulletin, 135,* 707–730.

Hatzenbuehler, M. L., Birkett, M., Van Wagenen, A., & Meyer, I. H. (2014). Protective school climates and reduced risk for suicide ideation in sexual minority youths. *American Journal of Public Health*, *104*, 279–286. doi:10.2105/AJPH.2013.301508

Herek, G. M. (2009). Hate crimes and stigma-related experiences among sexual minority adults in the United States: Prevalence estimates from a national probability sample. *Journal of Interpersonal Violence, 24,* 54–74.

Herek, G. M., Cogan, J. C., Gillis, J. R., & Glunt, E. K. (1998). Correlates of internalized homophobia in a community sample of lesbians and gay men. *Journal of the Gay and Lesbian Medical Association, 2,* 17-26.

Herrick, A. L., Stall, R., Chmiel, J. S., Guadamuz, T. E., Penniman, T., Shoptaw, S., Ostrow, D. & Plankey, M. W. (2013). It gets better: Resolution of internalized homophobia over time and associations with positive health outcomes among MSM. *AIDS and Behavior, 17,* 1423-1430. doi:10.1007/s10461-012-0392-x

Hershberger, S. L., & D'Augelli, A. R. (1995). The impact of victimization on the mental health and suicidality of lesbian, gay, and bisexual youths. *Developmental psychology, 31,* 65 - 74. doi:10.1037/0012-1649.31.1.65.

King, M., Semlyen, J., Tai, S. S., Killaspy, H., Osborn, D., Popelyuk, D., & Nazareth, I. (2008). A systematic review of mental disorder, suicide, and deliberate self harm in lesbian, gay and bisexual people. *BMC psychiatry, 8,*(70). Retrieved from http://www.biomedcentral.com/1471-244X/8/70

Kwon, P. (2013). Resilience in lesbian, gay, and bisexual individuals. *Personality and Social Psychology Review, 17,* 371-383. doi:10.1177/1088868313490248

La Guardia, J. G., & Ryan, R. M. (2007). Why identities fluctuate: Variability in traits as a function of situational variations in autonomy support. *Journal of Personality, 75,* 1205-1228.

Legate, N., Ryan, R. M., & Weinstein, N. (2012). Is coming out always a "good thing"? Exploring the relations of autonomy support, outness, and wellness for lesbian, gay, and bisexual individuals. *Social Psychological and Personality Science, 3,* 145-152. doi:10.1177/1948550611411929

Legault, L., Gutsell, J. N., & Inzlicht, M. (2011). Ironic effects of antiprejudice messages: How motivational interventions can reduce (but also increase) prejudice. *Psychological Science, 22*, 1472-1477. doi:10.1177/0956797611427918

Little, R. J. A., & Rubin, D. B. (1987*). Statistical analysis with missing data.* New York, NY: John Wiley.

Meyer, I. H. (1995). Minority stress and mental health in gay men. *Journal of Health and Social Behavior, 36,* 38-56.

Meyer, I. H. (2013). Prejudice, social stress, and mental health in lesbian, gay, and bisexual populations: Conceptual issues and research evidence. *Psychology of Sexual Orientation and Gender Diversity, 1,* 3-26. doi:10.1037/2329-0382.1.S.3

Meyer, I. H., & Dean, L. (1998). Internalized homophobia, intimacy, and sexual behavior among gay and bisexual men. In G. M. Herek (Ed.), *Stigma and sexual orientation: Understanding prejudice against lesbians, gay men, and bisexuals* (pp. 160-186). Thousand Oaks, CA: Sage.

Miller, C., & Major, B. (2000). Coping with stigma and prejudice. In T. F. Heatherton, R. E. Kleck, M. R. Hebl, & J. G. Hull (Eds.), *The social psychology of stigma* (pp. 153-183). New York, NY: Guilford.

Mohr, J. J., & Fassinger, R. E. (2000). Measuring dimensions of lesbian and gay male experience. *Measurement and Evaluation in Counseling and Development, 33*, 66–90.

Newcomb, M. E., & Mustanski, B. (2010). Internalized homophobia and internalizing mental health problems: A meta-analytic review. *Clinical Psychology Review, 30,* 1019-1029. doi:10.1016/j.cpr.2010.07.003

Pachankis, J. E. (2007). The psychological implications of concealing a stigma: A cognitive-

affective-behavioral model. *Psychological Bulletin, 133*, 328–345.

Pachankis, J. E., Cochran, S. D., & Mays, V. M. (2015). The mental health of sexual minority adults in and out of the closet: A population-based study. *Journal of Consulting and Clinical Psychology, 83,* 890-901. doi: 0.1037/ccp0000047

Pachankis, J. E., Goldfried, M. R., & Ramrattan, M. E. (2008). Extension of the rejection sensitivity construct to the interpersonal functioning of gay men. *Journal of Consulting and Clinical Psychology, 76*, 306-317.

Pew Research Center (2013). The global divide on homosexuality: Greater acceptance in more secular and affluent countries. Survey report by Pew Global Attitudes Project: http://www.pewglobal.org/files/2013/06/Pew-Global-Attitudes-Homosexuality-Report-FINAL-JUNE-4-2013.pdf

Radloff, L. S. (1977). The CES-D scale a self-report depression scale for research in the general population. *Applied psychological measurement, 1*, 385-401.

Radkowsky, M., & Siegel, L. J. (1997). The gay adolescent: Stressors, adaptations, and psychological interventions. *Clinical Psychology Review, 17*, 191-216.

Ragins, B. R. (2004). Sexual orientation in the workplace: The unique work and career experiences of gay, lesbian and bisexual workers. *Research in Personnel and Human Resources Management, 23*, 35–120.

Raudenbush, S. W., Bryk, A. S., Cheong, A. S., Fai, Y. F., Congdon, R. T., & du Toit, M. (2011). *HLM 7: Hierarchical linear and nonlinear modeling.* Lincolnwood, IL: Scientific Software International.

Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist, 55*, 68–78.

Ryan, W. S., Legate, N., & Weinstein, N. (2015). Coming out as lesbian, gay, or bisexual: The lasting impact of initial disclosure experiences. *Self and Identity, 14*, 549-569. doi:10.1080/15298868.2015.1029516

Schrimshaw, E. W., Siegel, K., Downing Jr, M. J., & Parsons, J. T. (2013). Disclosure and concealment of sexual orientation and the mental health of non-gay-identified, behaviorally bisexual men. *Journal of Consulting and Clinical Psychology, 81*, 141-153. doi:10.1037/a0031272

Semlyen, J., King, M., Varney, J., & Hagger-Johnson, G. (2016). Sexual orientation and symptoms of common mental disorder or low wellbeing: Combined meta-analysis of 12 UK population health surveys. *BMC Psychiatry, 16*(67). Retrieved from: http://bmcpsychiatry.biomedcentral.com/articles/10.1186/s12888-016-0767-z

Shacham, R. (2009). A utility for exploring HLM 2 and 3 way interactions [Computer software]. Available from http://www.people.ku.edu/~preacher/interact/shacham/index.htm.

Uysal, A., Lin, H. L., & Knee, C. R. (2010). The role of need satisfaction in self-concealment and well-being. *Personality and Social Psychology Bulletin, 6*, 187-199. doi:10.1177/0146167209354518

Vansteenkiste, M., & Ryan, R. M. (2013). On psychological growth and vulnerability: Basic psychological need satisfaction and need frustration as a unifying principle. *Journal of Psychotherapy Integration, 23*, 263-280. doi:10.1037/a0032359

Table 1. *Means and standard deviations of study variables overall, across social context, and split by sexual orientation.*

	Overall sample		Sexual orientation type		
	Mean	*SD*	Gay Men	Lesbians	Bisexuals
Internalized homophobia	1.63	0.80	1.61	1.69	1.63
Autonomy support	5.52	0.94	5.42	5.42	5.13
Family	5.45[b]	1.38	5.51	5.54	5.20
Friends	6.19[a]	0.93	6.28	6.24	5.89
Coworkers/peers	4.92[c]	1.32	5.04	4.85	4.72
Outness	5.59	1.17	5.86	5.60	4.88
Family	5.09[b]	1.89	5.34	5.03	4.48
Friends	6.62[a]	0.86	6.82	6.62	6.12
Coworkers/peers	5.07[b]	1.80	5.42	5.18	4.03
Depression	2.36	1.27	2.29	2.25	2.63
Family	2.60[b]	1.62	2.50	2.54	2.91
Friends	2.05[a]	1.19	2.00	1.89	2.33
Coworkers/peers	2.42[b]	1.46	2.37	2.32	2.66
Anxiety	2.52	1.17	2.48	2.44	2.71
Family	2.80[b]	1.58	2.73	2.68	3.12
Friends	2.07[a]	1.09	2.01	2.44	2.26
Coworkers/peers	2.69[b]	1.41	2.70	2.60	2.76

NOTE: $N = 156$, however two individuals had missing data on all measures except for internalized homophobia; two more individuals did not provide data on their outness with coworkers/peers; All alphabetic superscripts after means refer to significant differences ($p < .05$) as identified by follow-up pairwise comparisons using paired sample's t-tests with Bonferroni correction to adjust for multiple comparisons. Means with a common letter in their superscript were not significantly different from one another.

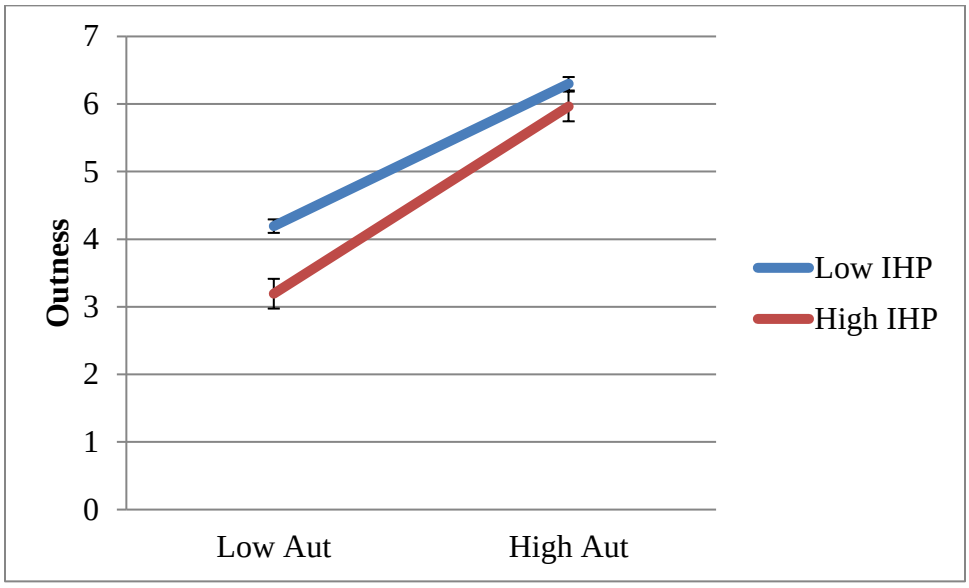
Table 2. *Main effects and interaction effects of outness and psychological well-being in multilevel models*

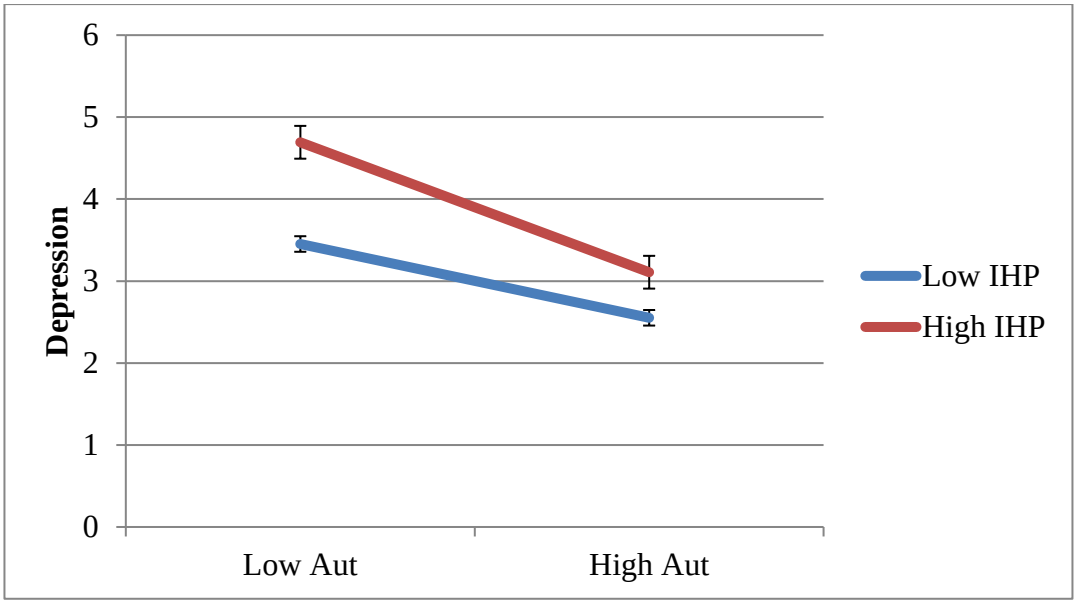
	Outness		Depression		Anxiety	
	b	95% CI	*b*	95% CI	*b*	95% CI
Level-1						
Outness	---	---	-.07†	-.14, .002	-.08*	-.14, -.01
Autonomy Support	.67***	.56, .79	-.21***	-.32, -.09	-.33***	-.45, -.22
Level-2						
IHP	-.19*	-.37, -.01	.56***	.32, .80	.55***	.33, .76
Gay	.73***	.30, 1.15	-.20	-.66, .24	-.15	-.53. .24
Lesbian	.63**	.14, 1.12	-.29	-.82, .23	-.20	-.65, .25
IHP X autonomy support	.14*	.003, .28	-.16*	-.30, -.02	-.12*	-.22, -.03

NOTE: All coefficients are unstandardized HLM coefficients. IHP refers to internalized homophobia; Gay and Lesbian refer to the dummy coded sexual orientation variables with bisexuals as the reference group; IHP X autonomy support refers to the interaction of internalized homophobia (at Level-2) on autonomy support (at Level-1).

*** $p < .001$, ** $p < .01$, *p < .05, † $p < .10$

Figures 1a & 1b. *Interaction of internalized homophobia and autonomy support on outness and depression. Slopes for the interaction were calculated at 1 standard deviation above and below the mean. Bars represent standard errors of the slope estimates. The same pattern of interaction occurs when anxiety is the outcome.*





Biographies

William Ryan is a graduate student at University of California, Santa Barbara. Will's research interests center on threat, diversely defined and assessed. His work (so far) has focused on threat in relation to homophobia, gender stereotypes, and disclosure and concealment of stigmatized identities. He also devotes a significant portion of his time to developing new approaches for processing and analyzing cardiovascular data.

Nicole Legate is an Assistant Professor in the Department of Psychology at Illinois Institute of Technology. She received her PhD in Clinical Psychology from the University of Rochester in 2014. Her research focuses on how the social environment can support – or conversely, thwart – health and wellness, particularly for those with a stigmatized identity. Much of this work has looked at this issue in the context of coming out as lesbian, gay or bisexual. She is particularly interested in how social contexts can promote resilience in those with a stigmatized identity.

Netta Weinstein is a Senior Lecturer (Associate Professor) in the School of Psychology at Cardiff University. She received her PhD from the University of Rochester in 2010 and was based at the University of Essex until 2015. She studies the role of motivation in determining the quality of emotion and interpersonal experiences, including the capacity for adaptive self-regulation, such as the regulation of negative emotions and psychological stress, as well as effort and care extended to relationships.

Qazi Rahman is a Senior Lecturer (Associate Professor) in the Institute of Psychiatry at King's College London. He received his PhD from King's College London in 2003. His research focuses on the biological basis of human sexual orientation and lesbian, gay, bisexual, and transgender (LGBT) mental health, particularly with a focus on identifying factors that promote health inequalities between LGBT and heterosexual populations.